

In the Claims:

Please amend claims 11-13 and 16. Please add new claims 21-32. The claims are as follows:

10. (Currently Amended) A method for dissipating heat from an electronic package having one or more components, comprising:

providing a substrate having a first coefficient of thermal expansion;

attaching a lid to said substrate, said lid including a vapor chamber, [[the]] said lid having a second coefficient of thermal expansion said second coefficient of thermal expansion about equal to said first coefficient of thermal expansion;

~~matching said first coefficient of thermal expansion matched to said second coefficient of expansion;~~

providing a solid thermal transfer medium in direct contact with a back surface of each component and an outer surface of a lower wall of said lid; and

mounting each component directly to a top surface of said substrate; and

electrically connecting each component to a top surface of said substrate.

11. (Currently Amended) The method of claim 10, wherein an upper wall of said lid has said second coefficient of thermal expansion, and said lower wall of said lid has a third coefficient of thermal expansion and, each said component[[s]] have has a fourth coefficient of thermal expansion, and further including matching said third coefficient of thermal expansion is about equal to said fourth coefficient of thermal expansion and said second coefficient of thermal expansion different from said third coefficient of thermal expansion.

12. (Currently Amended) The method of claim 10, further including:

mounting a heat sink having a ~~fifth~~ third coefficient of thermal expansion to an outer surface of a top wall of said lid, ~~and~~

~~matching~~ said fifth third coefficient of thermal expansion between about 25% and about 700% ~~of~~ to said second coefficient of thermal expansion.

13. (Currently Amended) The method of claim 10, wherein said lower wall of said lid has protruding regions for maintaining equivalent contact with said thermal transfer medium on thin components of said one or more components as is maintained by thin regions on thick components of said one or more components.

14. (Original) The method of claim 10, further including providing supports within said vapor chamber between an upper wall of said vapor chamber and said lower wall, some or all of said supports aligned over some or all of said components.

15. (Original) The method of claim 10, wherein said package is selected from the group consisting of ball grid array modules, pin grid array modules, land grid array modules and HyperBGATM modules.

16. (Currently Amended) The method of claim [[1]] 10, wherein said lid is formed from material selected from the group consisting of aluminum, copper, Invar, gold, silver, nickel, aluminum-silicon carbide, plastics, ceramics and composites.

17. (Original) The method of claim 10, wherein said substrate includes material selected from the group consisting of ceramics, fiberglass, polytetraflouroethylene, and polymers.

21. (New) The method of claim 10, wherein said lower wall of said lid is formed from a different material than sidewalls and an upper wall of said lid.

22. (New) The method of claim 10, wherein an upper wall of said lid has said second coefficient of thermal expansion, said lower wall of said lid has a third coefficient of thermal expansion, each said component has a fourth coefficient of thermal expansion and said third coefficient of thermal expansion between about 50% to about 700% of said fourth coefficient of thermal expansion.

23. (New) A method for dissipating heat from an electronic package having one or more components, comprising:

providing a substrate having a first coefficient of thermal expansion;

attaching a lid to said substrate, said lid including a vapor chamber, said lid having a second coefficient of thermal expansion, said first coefficient of thermal expansion between about 25% to about 700% of said second coefficient of thermal expansion;

placing a solid thermal transfer medium in direct contact with a back surface of each component and an outer surface of a lower wall of said lid;

mounting each component directly to a top surface of said substrate; and

electrically connecting each component to said substrate.

24. (New) The method of claim 23, wherein an upper wall of said lid has said second coefficient of thermal expansion, said lower wall of said lid has a third coefficient of thermal expansion, each said component has a fourth coefficient of thermal expansion and said third coefficient of thermal expansion about equal to said fourth coefficient of thermal expansion.

25. (New) The method of claim 23, wherein an upper wall of said lid has said second coefficient of thermal expansion, said lower wall of said lid has a third coefficient of thermal expansion, each said component has a fourth coefficient of thermal expansion and said third coefficient of thermal expansion between about 50% to about 700% of said fourth coefficient of thermal expansion.

26. (New) The method of claim 23, wherein said lower wall of said lid is formed from a different material than sidewalls and an upper wall of said lid.

27. (New) The method of claim 23, further including mounting a heat sink having a third coefficient of thermal expansion to an outer surface of a top wall of said lid, said third coefficient of thermal expansion between about 25% to about 700% of said second coefficient of thermal expansion.

28. (New) The method of claim 23, wherein said lower wall of said lid has protruding regions for maintaining equivalent contact with said thermal transfer medium on thin components of said

one or more components as is maintained by thin regions on thick components of said one or more components.

29. (New) The method of claim 23, wherein said package is selected from the group consisting of ball grid array modules, pin grid array modules, land grid array modules and HyperBGA™ modules.

30. (New) The method of claim 23, wherein said lid is formed from material selected from the group consisting of aluminum, copper, Invar, gold, silver, nickel, aluminum-silicon carbide, plastics, ceramics and composites.

31. (New) The method of claim 23, wherein said substrate includes material selected from the group consisting of ceramics, fiberglass, polytetraflouoroethylene, and polymers.

32. (New) The method of claim 23, further including providing supports within said vapor chamber between an upper wall of said vapor chamber and said lower wall, some or all of said supports aligned over some or all of said components.